

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Original): A method for tracking a requested signal, the method comprising:

receiving a request for the requested signal;
generating transaction identification data which identifies the received request;

including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal.

Claim 2 (Original): The method of Claim 1 where including comprises:

retrieving the basis signal; and

including the basis signal in the requested signal to form the watermarked signal in such a manner that the pattern is embedded in the watermarked signal and can be recognized in the watermarked signal.

Claim 3 (Previously presented): The method of Claim 2 wherein including the basis signal comprises:

logically dividing the basis signal into segments; and

for each segment of the basis signal,

adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern has a first logical value; and

subtracting the segment of the basis signal from the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

Claim 4 (Original): The method of Claim 1 further comprising:

sending the watermarked signal in response to the request for the requested signal.

Claim 5 (Original): The method of Claim 1 wherein including comprises:

selecting watermarked signal fragments representing a first logical value for corresponding portions of the pattern which have the first logical value;

selecting watermarked signal fragments representing a second logical value for corresponding portions of the pattern which have the second logical value; and

combining the watermarked signal fragments representing the first and second logical values to form the watermarked signal.

Claim 6 (Previously presented): The method of Claim 5 wherein the watermarked signal fragments are compressed such that the watermarked signal fragments comprise the watermarked signal in a compressed form.

Claim 7 (Original): A method for enabling embedding of transaction-specific identification data into a requested signal, the method comprising:

logically dividing the requested signal into segments;

for each segment,

embedding a first logical value in the segment to form a first embedded segment;

embedding a second logical value in the segment to form a second embedded segment; and

including both the first and second embedded segments in a composite signal.

Claim 8 (Original): The method of Claim 7 farther comprising:

for each of the segments of the requested signal:

selecting from first and second embedded segments of the composite signal according to a corresponding bit of the transaction-specific identification data.

Claim 9 (Original): The method of Claim 8 further comprising:

combining the selected embedded segments of the composite signal to form a watermarked signal which includes the transaction-specific identification data embedded therein.

Claim 10 (Original): The method of Claim 7 wherein including both the first and second embedded segments in a composite signal comprises:

including the first embedded segment in a first frame;
compressing the first frame to form a first compressed frame;
including the second embedded segment in a second frame;
compressing the second frame to form a second compressed frame; and
including both the first and second compressed frames in the composite signal.

Claim 11 (Original): The method of Claim 10 wherein including both the first and second embedded segments in a composite signal further comprises:

determining that the first and second compressed frames are equivalent; and
including a single compressed frame in the composite signal to represent both the first and second compressed frames.

Claim 12 (Original): A method for embedding transaction-specific identification data into a requested signal, the method comprising:

retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal, selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein.

Claim 13 (Original): The method of Claim 12 wherein the first and second marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

Claim 14 (Original): A computer-readable storage medium on which is stored computer code which, when executed by a computer, causes the computer to enable tracking a requested signal by:

receiving a request for the requested signal;

generating transaction identification data which identifies the received request;

including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal.

Claim 15 (Original): The computer-readable storage medium of Claim 14 where including comprises:

retrieving the basis signal; and

including the basis signal in the requested signal to form the watermarked signal in such a manner that the pattern is embedded in the watermarked signal and can be recognized in the watermarked signal.

Claim 16 (Previously presented): The computer-readable storage medium of Claim 15 wherein including the basis signal comprises:

logically dividing the basis signal into segments; and
for each segment of the basis signal,

adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern has a first logical value; and

subtracting the segment of the basis signal from the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

Claim 17 (Original): The computer-readable storage medium of Claim 14 wherein the computer code, when executed by the computer, further causes the computer to enable tracking a requested signal by:

sending the watermarked signal in response to the request for the requested signal.

Claim 18 (Original): The computer-readable storage medium of Claim 14 wherein including comprises:

selecting watermarked signal fragments representing a first logical value for corresponding portions of the pattern which have the first logical value;

selecting watermarked signal fragments representing a second logical value for corresponding portions of the pattern which have the second logical value; and

combining the watermarked signal fragments representing the first and second logical values to form the watermarked signal.

Claim 19 (Original): The computer-readable storage medium of Claim 18 wherein the watermarked signal fragments are compressed such that combining the watermarked signals fragments forms the watermarked signal in a compressed form.

Claim 20 (Original): A computer-readable storage medium on which is stored computer code which, when executed by a computer, causes the computer to enable embedding of transaction-specific identification data into a requested signal by:

- logically dividing the requested signal into segments;

- for each segment,

 - embedding a first logical value in the segment to form a first embedded segment;

 - embedding a second logical value in the segment to form a second embedded segment; and

- including both the first and second embedded segments in a composite signal.

Claim 21 (Original): The computer-readable storage medium of Claim 20 wherein the computer code, when executed by the computer, further causes the computer to enable embedding of transaction-specific identification data into a requested signal by:

- for each of the segments of the requested signal:

 - selecting from first and second embedded segments of the composite signal according to a corresponding bit of the transaction-specific identification data.

Claim 22 (Original): The computer-readable storage medium of Claim 21 wherein the computer code, when executed by the computer, further causes the computer to enable embedding of transaction-specific identification data into a requested signal by:

combining the selected embedded segments of the composite signal to form a watermarked signal which includes the transaction-specific identification data embedded therein.

Claim 23 (Original): The computer-readable storage medium of Claim 20 wherein including both the first and second embedded segments in a composite signal comprises:

including the first embedded segment in a first frame;
compressing the first frame to form a first compressed frame;
including the second embedded segment in a second frame;
compressing the second frame to form a second compressed frame; and
including both the first and second compressed frames in the composite signal.

Claim 24 (Original): The computer-readable storage medium of Claim 23 wherein including both the first and second embedded segments in a composite signal further comprises:

determining that the first and second compressed frames are equivalent; and
including a single compressed frame in the composite signal to represent both the first and second compressed frames.

Claim 25 (Previously presented): A computer-readable storage medium on which is stored computer code which, when executed by a computer, causes the computer to enable embedding transaction-specific identification data into a requested signal by:

retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal, selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein.

Claim 26 (Original): The computer-readable storage medium of Claim 25 wherein the first and second marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

Claim 27 (Original): A computer system comprising:
a processor;
a memory coupled to the processor; and
a watermark which executes in the processor from the memory and
which, when executed, enables tracking of a requested signal by:

receiving a request for the requested signal;
generating transaction identification data which identifies the
received request; and

including a pattern in the requested signal to form a watermarked
signal using a predetermined basis signal, wherein the transaction
identification data can be derived from the pattern; further wherein the
inclusion of the basis signal in the requested signal is designed to introduce
no more than a predetermined maximum level of perceptibility to the
requested signal.

Claim 28 (Original): The computer system of Claim 27 where including
comprises:

retrieving the basis signal; and

including the basis signal in the requested signal to form the watermarked
signal in such a manner that the pattern is embedded in the watermarked signal
and can be recognized in the watermarked signal.

Claim 29 (Previously presented): The computer system of Claim 28 wherein including the basis signal comprises:

logically dividing the basis signal into segments; and

for each segment of the basis signal,

adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern has a first logical value; and

subtracting the segment of the basis signal from the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

Claim 30 (Original): The computer system of Claim 27 wherein the watermarker, when executed, enables tracking of a requested signal by also:

sending the watermarked signal in response to the request for the requested signal.

Claim 31 (Original): The computer system of Claim 27 wherein including comprises:

selecting watermarked signal fragments representing a first logical value for corresponding portions of the pattern which have the first logical value;

selecting watermarked signal fragments representing a second logical value for corresponding portions of the pattern which have the second logical value; and

combining the watermarked signal fragments representing the first and second logical values to form the watermarked signal.

Claim 32 (Original): The computer system of Claim 31 wherein the watermarked signal fragments are compressed such that combining the watermarked signals fragments forms the watermarked signal in a compressed form.

Claim 33 (Original): A computer system comprising:
a processor;
a memory coupled to the processor; and
a blank watermarker which executes in the processor from the memory and which, when executed, enables embedding of transaction-specific identification data into a requested signal by:

logically dividing the requested signal into segments;
for each segment,
 embedding a first logical value in the segment to form a first embedded segment;
 embedding a second logical value in the segment to form a second embedded segment; and
 including both the first and second embedded segments in a composite signal.

Claim 34 (Original): The computer system of Claim 33 further comprising:
for each of the segments of the requested signal:

selecting from first and second embedded segments of the
composite signal according to a corresponding bit of the transaction-
specific identification data.

Claim 35 (Original): The computer system of Claim 34 wherein the blank
watermarker, when executed, enables embedding of transaction-specific
identification data into a requested signal by also:

combining the selected embedded segments of the composite signal to form
a watermarked signal which includes the transaction-specific identification data
embedded therein.

Claim 36 (Original): The computer system of Claim 33 wherein including
both the first and second embedded segments in a composite signal comprises:

including the first embedded segment in a first frame;
compressing the first frame to form a first compressed frame;
including the second embedded segment in a second frame;
compressing the second frame to form a second compressed frame; and
including both the first and second compressed frames in the composite
signal.

Claim 37 (Original): The computer system of Claim 36 wherein including both the first and second embedded segments in a composite signal further comprises:

determining that the first and second compressed frames are equivalent; and
including a single compressed frame in the composite signal to represent both the first and second compressed frames.

Claim 38 (Original): A computer system comprising:

a processor;

a memory coupled to the processor; and

a watermark which executes in the processor from the memory and which, when executed, embeds transaction-specific identification data into a requested signal by:

retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal,

selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein.

Claim 39 (Original): The computer system of Claim 38 wherein the first and second marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

Claim 40 (Original): A computer-readable storage medium on which is stored a signal which comprises:

one or more segments of a subject signal;

for each of the segments,

a first segment instance representing a first logical value of portion of a pattern which is embedded in the segment; and

a second segment instance representing a second logical value of the portion embedded in the segment.

Claim 41 (Original): The computer-readable storage medium of Claim 40 wherein two or more segments of the subject signal are represented in a composite frame; and

further wherein the composite frame includes the following frame instances:

(i) the first segment instance of a first of the two or more segments of the composite frame and the first segment instance of a second of the two or more segment of the composite frame;

(ii) the first segment instance of the first segment of the composite frame and the second segment instance of the second segment of the composite frame;

(iii) the second segment instance of the first segment of the composite frame and the first segment instance of the second segment of the composite frame; and

(iv) the second segment instance of the first segment of the composite frame and the second segment instance of the second segment of the composite frame.

Claim 42 (Original): The computer-readable storage medium of Claim 41 wherein the frame instances (i) through (iv) are compressed.

Claim 43 (Original): The computer-readable storage medium of Claim 40 wherein the first and second segment instances or each of the segments are compressed.

Claim 44 (Previously presented): A transaction-specific watermark embedded in requested digital content.

Claim 45 (Previously presented): The watermark of claim 44, wherein the watermark is embedded in a carrier wave transporting the requested digital content via a network to a party who requested the digital content.

Claim 46 (Previously presented): The watermark of claim 44, wherein two or more segments of a signal representing the requested digital content are included in a composite frame; and further wherein the composite frame includes:

(i) a first segment instance of a first of the two or more segments of the composite frame and a first segment instance of a second of the two or more segment of the composite frame;

(ii) the first segment instance of the first segment of the composite frame and a second segment instance of the second segment of the composite frame;

(iii) a second segment instance of the first segment of the composite frame and the first segment instance of the second segment of the composite frame; and

(iv) the second segment instance of the first segment of the composite frame and the second segment instance of the second segment of the composite frame.

Claim 47 (Previously presented): A transaction-specific watermark embedded in requested digital content, the watermark being generated by one or more processors configured to perform acts of:

generating transaction identification data identifying a received request;

including a pattern in the requested digital content to form a watermarked signal using a predetermined basis signal, wherein the transaction identification data can be derived from the pattern, wherein including is designed to introduce no more than a predetermined maximum level of perceptibility to the requested digital content.

Claim 48 (Previously presented): The watermark of claim 47, wherein the watermark is embedded in a carrier wave transporting the requested digital content via a network to a party who requested the requested digital content.

Claim 49 (Previously presented): The watermark of claim 47, wherein two or more segments of a signal representing the requested digital content are included in a composite frame; and further wherein the composite frame includes:

(i) a first segment instance of a first of the two or more segments of the composite frame and a first segment instance of a second of the two or more segment of the composite frame;

(ii) the first segment instance of the first segment of the composite frame and a second segment instance of the second segment of the composite frame;

(iii) a second segment instance of the first segment of the composite frame and the first segment instance of the second segment of the composite frame; and

(iv) the second segment instance of the first segment of the composite frame and the second segment instance of the second segment of the composite frame.